provided by which the metalized contact surfaces 96, 98 can be protected from the coating material. The fixtures may be rotated for coating the front facets 100 and the rear facets 102 of the diode laser bar 20.

The rotation structure makes it possible to expose successively one fixture 20 after the other to the coating vapor 176, which results in the coating of the laser facets of the laser bars.

The differences between the apparatus according to the invention and the apparatus as disclosed in US 6 037 006 as pointed out by the Examiner are as follows:

1. In the reference, the electron beam source 160 is not centered relative to the rotation structure 164. The lasers are therefore not supported with the facets all essentially at the same distance from the coating source. A simultaneous coating at the same rate of all the laser devices in the coating chamber can therefore not be achieved.

2. There are no means for operating lasers and monitoring them by measuring at least one of the laser parameters (laser light emitted from the front and rear facets, the electric voltage at a p-n junction of the laser, the quantum efficiency of the laser light emitted from the front and/or the rear facet of the laser and the threshold current of the laser) during the coating process.

3. There is no shutter included in the vacuum chamber for rapidly stopping the coating process.

US 5 980 975 discloses an apparatus for the coating of substrates. No individual shutters are provided for each substrate to be coated. There is only a central shutter 11 for controlling the coating process as well as various means like 4a and 4b for ensuring a homogenous coating over the width of the substrate.

Commercially available lasers are provided with a protective coating to avoid oxidation of the Al doping of the III-V compound semiconductor material. However, since the exact layer thickness of the coating is not relevant for diode lasers, the thickness of these coatings varies by about 30% from diode laser to diode laser. With only on central shutter provided for controlling the coating process, no individual control would be possible and a coating variation of 30% would occur, which is unacceptable for a laser facet coating according to the present invention.

The present invention provides for an apparatus in which each laser is monitored during the coating process and for each laser a shutter is provided so that the coating process can be discontinued individually for each laser as the coating reaches the optimum thickness as determined by the individual laser monitoring.

Certainly, such an apparatus, in which each laser is monitored during the coating procedure and the coating procedure can be individually discontinued, is not disclosed in either of the cited references. A combination of the two references can therefore not possibly lead to the apparatus as claimed in claim 14 of the present application.

Furthermore, US 6 037 006 has a filing date of 03/14/00, whereas the priority date of the present application is 03/21/98. A certified copy of German application 198 12 562.3 is enclosed herewith in support of the claim for priority. As a result, US 6 037 006 is not available for combination with US 5 980 975 to reject the present application under 35 USC 103.

Reconsideration of the Examiner's rejection under 35 USC 103 is respectfully requested.

Claims 15 to 20, which are directed to particularly advantageous features, are all dependent on claim 14 and consequently, include all the features of this claim so that they should be patentable already for that reason.

Reconsideration of these claims is also requested and allowance of claims 14 to 20 as amended is solicited.

Respectfully submitted,

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MARKUP VERSION TO SHOW CHANGES MADE

The claims have been amended as follows:

14. An apparatus for coating at least one of the front and rear facets of semiconductor laser diodes (lasers) with an anti-reflection layer of minimal rest reflectivity, [while] said apparatus including means for monitoring, in-situ, at least one of laser parameters of each laser, including laser light emitted from at least one of the front and rear facets of [a] each laser, the electric voltage at a p-n junction of the laser, the quantum efficiency of the laser light emitted from at least one of the front and rear facet of the laser, and the threshold current of the laser, said apparatus comprising a receiver for containing lasers to be coated, a coating source disposed in said receiver, a support structure for supporting said lasers to be coated such that said lasers are supported with their facets all at essentially the same distance from said coating source, and [at least one] for each laser a shutter supported in said receiver so as to be movable selectively in front of [at least one of said] the respective lasers to protect [it] them from further coating.

17. An apparatus according to claim 14, wherein said lasers are arranged linearly along lines disposed at opposite sides equidistantly from a [linear coating source] center line.

18. An apparatus according to claim 14, wherein a control unit is provided which monitors the laser parameter of [at least one of the] said lasers disposed in said receiver for the coating thickness of their facets while [said at least one] each laser is electrically operated.